INDEX TO AUTHORS.

A

Anderson, R. J. The chemistry of the lipoids of tubercle bacilli. VII. Analysis of the soft wax from tubercle bacilli, 327

—. The chemistry of the lipoids of tubercle bacilli. VIII. Concerning the unsaponifiable wax, 339

—. The chemistry of the lipoids of tubercle bacilli. IX. The occurrence of hexacosanic acid in the unsaponifiable wax, 351

— and **Chargaff, Erwin.** The chemistry of the lipoids of tubercle bacilli. VI. Concerning tuberculostearic acid and phthioic acid from the acetone-soluble fat, 77

— and **Roberts, E. Gilman.** The chemistry of the lipoids of tubercle bacilli. X. The separation of lipoid fractions from avian tubercle bacilli, 509

— and —. The chemistry of the lipoids of tubercle bacilli. XI. The phosphatide fraction of the avian tubercle bacilli, 519

— and —. The chemistry of the lipoids of tubercle bacilli. XII. The separation of the lipoid fractions from bovine tubercle bacilli, 529

Appleman, W. K. See SCHMIDT, APPLEMAN, and KIRK, 137

B

Bachem, Albert. See BOOR and BACHEM, 743

Barbour, A. D. Enzymatic hydrolysis of glycogen, 29

Becker, J. Ernestine. See MCCOLLUM, RASK, and BECKER, 779

Berg, Clarence P., Rose, William C., and **Marvel, Carl S.** Tryptophane and growth. II. Growth upon a tryptophane-deficient basal diet supplemented with tryptophane derivatives, 207

—, —, and —. Tryptophane and growth. III. 3-Indolepropionic acid and 3-indolepyruvic acid as supplementing agents in diets deficient in tryptophane, 219

Bischoff, Fritz, Ullmann, H. J., Hill, Elsie, and **Long, M. Louisa.** Studies in hyperthermia induced by the high frequency electric current, 675

Black, Archie. See STEENBOCK, BLACK, and THOMAS, 585

Blish, M. J., and **Sandstedt, R. M.** The nature and identity of wheat glutenin, 195

Blume, Florence. See MORGAN, STRAUCH, and BLUME, 385

Bodansky, Meyer, Schwab, Edward H., and **Brindley,**

XUM

Paul. Creatine metabolism in a case of generalized myositis fibrosa, 307
Bollman, Jesse L. The influence of protein metabolism on the conversion of creatine to creatinine, 169
Boor, Alden Kinney, and **Bachem, Albert.** A spectrographic study of carbon monoxide hemoglobin, 743
Brindley, Paul. See BODANSKY, SCHWAB, and BRINDLEY, 307
Bruen, Curtis. Nomogram deriving basal metabolism from height-weight coordinates, 607
Buell, Mary V. On the origin of inosinic acid, 435
Burton, Helen Brown. The influence of cereals upon the retention of calcium and phosphorus in children and adults, 405

C

Cadden, J. F. See STANDER, EASTMAN, HARRISON, and CADDEN, 233
Cartland, George F., Heyl, Frederick W., and **Neupert, E. F.** Biological and chemical changes in cow's ovaries during pregnancy, 539
Chambers, William H., and **Lusk, Graham.** Animal calorimetry. XXXIX. Specific dynamic action in the normal and phlorhizinized dog, 611
Chanutin, Alfred, and **Silvette, Herbert.** A study of creatine metabolism in the nephrectomized white rat, 179
Chargaff, Erwin. See ANDERSON and CHARGAFF, 77
Church, Anna E. See NORRIS and CHURCH, 477
Closs, John O. See KAHLENBERG and CLOSS, 783
Conant, James B., and **McGrew, Ralph V.** An inquiry into the existence of intermediate compounds in the oxygenation of hemoglobin, 421
Cook, Charles A., and **Smith, Arthur H.** The determination of isopropyl alcohol in the presence of acetone in the urine, 251
Cori, Carl F., and **Cori, Gerty T.** The influence of insulin and epinephrine on glycogen formation in the liver, 275
Cori, Gerty T. See CORI and CORI, 275
Csonka, Frank A., Phillips, Max, and **Jones, D. Breese.** Studies on lignin metabolism, 65

D

Dauphinee, James A. See HUNTER and DAUPHINEE, 627
Day, Alexander A. See STEARN and DAY, 299
Duden, C. W. See OLMSTED, DUDEN, WHITAKER, and PARKER, 115
—. See OLMSTED, WHITAKER, and DUDEN, 109

E

Eastman, N. J. See STANDER, EASTMAN, HARRISON, and CADDEN, 233

Elvehjem, C. A., Kemmerer, A. R., Hart, E. B., and **Halpin, J. G.** The effect of the diet of the hen on the iron and copper content of the egg, 89

Evenden, James. See CHAMBERS and LUSK, 611

F

Felsher, Augusta. See MORGAN and GARRISON, 687

Fishberg, Ella H. The significance of changes of viscosity in pathological sera, 465

Fred, E. B. See HOPKINS, PETERSON, and FRED, 21

G

Garrison, E. Alta. See MORGAN and GARRISON, 687

Greenberg, David M., and **Gunther, Lewis.** On the determination of diffusible and non-diffusible serum calcium, 491

Greenwald, Isidor. Studies on metabolism in pneumonia. I. The excretion of "organic acid" and a method for its determination, 447

Griffith, Wendell H. Benzoylated amino acids in the animal organism. V. The synthesis of glycine and of hippuric acid in rats, 751

Grove, E. W., Olmsted, W. H., and **Koenig, Karl.** The effect of diet and catharsis on the lower volatile fatty acids in the stools of normal men, 127

Gunther, Lewis. See GREENBERG and GUNTHER, 491

H

Halpin, J. G. See ELVEHJEM, KEMMERER, HART, and HALPIN, 89

Harding, Victor John, and **van Nostrand, Frederick H.** Variations in blood and urinary sugar after the ingestion of galactose, 765

Harrison, E. P. H., Jr. See STANDER, EASTMAN, HARRISON, and CADDEN, 233

Hart, E. B. See ELVEHJEM, KEMMERER, HART, and HALPIN, 89

Heyl, Frederick W. See CARTLAND, HEYL, and NEUPERT, 539

Hill, Edgar S. The spontaneous oxidation of dialuric acid, 713

Hill, Elsie. See BISCHOFF, ULLMANN, HILL, and LONG, 675

Himwich, Harold E., Koskoff, Y. D., and **Nahum, L. H.** Studies in carbohydrate metabolism. I. A glucose-lactic acid cycle involving muscle and liver, 571

Hopkins, E. W., Peterson, W. H., and **Fred, E. B.** The composition of the cells of certain bacteria with special reference to their carbon and their nitrogen content, 21

Hunter, Andrew, and **Dauphinee, James A.** The arginase method for the determination of arginine and its use in the analysis of proteins, 627

I

Isaac, L. A. See RAY and ISAAC, 549

J

Johnston, Charles G., and **Wilson, D. Wright.** The effect of hemorrhage on the acid-base equilibrium of the blood, 727

Jones, D. Breese. See CSONKA, PHILLIPS, and JONES, 65

K

Kahlenberg, Louis, and **Closs, John O.** Presence of aluminum in animal and plant matter, 783

Kemmerer, A. R. See ELVEHJEM, KEMMERER, HART, and HALPIN, 89

Kerr, Stanley E. Studies on the inorganic composition of blood. III. The influence of serum on the permeability of erythrocytes to potassium and sodium, 47

Kirk, Paul L. See SCHMIDT, APPLEMAN, and KIRK, 137

Koch, Elizabeth M., Koch, Fred C., and **Lemon, Harvey B.** Absorption spectra studies on cholesterol and ergosterol, 159

—. See KOCH, KOCH, and RAGINS, 141

Koch, Fred C., Koch, Elizabeth M., and **Ragins, Ida Kraus.** Fractionation studies on provitamin D, 141

—. See KOCH, KOCH, and LEMON, 159

Koenig, Karl. See GROVE, OLMSTED, and KOENIG, 127

Koskoff, Y. D. See HIMWICH, KOSKOFF, and NAHUM, 571

L

Leiboff, S. L. The absence of calcium in the human red blood cell, 759

Lemon, Harvey B. See KOCH, KOCH, and LEMON, 159

Lepkovsky, Samuel. The distribution of serum and plasma proteins in fish, 667

Levene, P. A., Mikeska, L. A., and **Mori, T.** On the carbohydrate of thymonucleic acid, 785

Lewis, Howard B. See WILSON and LEWIS, 559

Lichtman, S. S., and **Sobotka, Harry.** An enzymatic method for the detection and estimation of tyrosine in urine, 261

Long, M. Louisa. See BISCHOFF, ULLMANN, HILL, and LONG, 675

Luck, James Murray. See SAHYUN and LUCK, 1

Lusk, Graham. See CHAMBERS and LUSK, 611

M

Marvel, Carl S. See BERG, ROSE, and MARVEL, 207, 219

McCollum, E. V., Rask, O. S., and **Becker, J. Ernestine.** Do the spectrograms of Kahlenberg and Closs demonstrate the presence of aluminum in biological matter? 779

McGrew, Ralph V. See CONANT and MCGREW, 421

Mikeska, L. A. See LEVENE, MIKESKA, and MORI, 785

Miller, Lila. See MITCHELL and MILLER, 355
Misch, Alvina. See MORGAN and GARRISON, 687
Mitchell, Helen S., and **Miller, Lila.** Inorganic elements of spinach in the treatment of nutritional anemia, 355
Morgan, Agnes Fay, and **Garrison, E. Alta.** The effect of vitamin D and of reaction of diet upon response to parathyroid extract, 687
—, **Strauch, Clara M.,** and **Blume, Florence.** The nature and biological availability of almond carbohydrates, 385
Mori, T. See LEVENE, MIKESKA, and MORI, 785

N

Nahum, L. H. See HIMWICH, KOSKOFF, and NAHUM, 571
Neupert, E. F. See CARTLAND, HEYL, and NEUPERT, 539
Norris, Earl R., and **Church, Anna E.** A study of the antimony trichloride color reaction for vitamin A, 477
van Nostrand, Frederick H. See HARDING and VAN NOSTRAND, 765

O

von Oettingen, W. F., and **Sollmann, Torald.** The production of organic acids by excised intestines, 245
Olmsted, W. H., Duden, C. W., Whitaker, W. M., and **Parker R. F.** A method for the rapid distillation of the lower volatile fatty acids from stools, 115
Olmsted, W. H., Whitaker, W. M., and **Duden, C. W.** Steam distillation of the lower volatile fatty acids from a saturated salt solution, 109
—. See GROVE, OLMSTED, and KOENIG, 127
Osterberg, Arnold E. The estimation of glycogen in small amounts of tissue, 97

P

Parker, R. F. See OLMSTED, DUDEN, WHITAKER, and PARKER, 115
Peterson, W. H. See HOPKINS, PETERSON, and FRED, 21
Phillips, Max. See CSONKA, PHILLIPS, and JONES, 65

R

Ragins, Ida Kraus. See KOCH, KOCH, and RAGINS, 141
Rask, O. S. See MCCOLLUM, RASK, and BECKER, 779
Ray, G. B., and **Isaac, L. A.** Chemical studies on the spleen. IV. Evidence favoring the formation of a colorless form of hemoglobin after splenectomy, 549
Reed, C. I. See WEAVER and REED, 281
Riising, Blanche M. See STEENBOCK, BLACK, and THOMAS, 585
Roberts, E. Gilman. See ANDERSON and ROBERTS, 509, 519, 529
Rose, William C. See BERG, ROSE, and MARVEL, 207, 219

Russell, Walter C. The effect of the curing process upon the vitamin A and D content of alfalfa, 289

S

Sahyun, Melville, and **Luck, James Murray.** The influence of epinephrine and insulin on the distribution of glycogen in rabbits, 1

Sandstedt, R. M. See BLISH and SANDSTEDT, 195

Schmidt, Carl L. A., Appleman, W. K., and **Kirk, Paul L.** The apparent dissociation constants of tryptophane and of histidine, 137

Schwab, Edward H. See BODANSKY, SCHWAB, and BRINDLEY, 307

Silvette, Herbert. See CHANUTIN and SILVETTE, 179

Smith, Arthur H. See COOK and SMITH, 251

Sobotka, Harry. See LICHTMAN and SOBOTKA, 261

Sollmann, Torald. See VON OETTINGEN and SOLLMANN, 245

Sperry, Warren M. Lipid excretion. VII. The partition of fecal lipids in bile fistula dogs, 455

Spoehr, H. A., and **Strain, Harold H.** The interconversion of hexoses by means of phosphates and the formation of glutose, 365

Stander, H. J., Eastman, N. J., Harrison, E. P. H., Jr., and **Cadden, J. F.** The acid-base equilibrium of the blood in eclampsia, 233

Stearn, Allen E., and **Day, Alexander A.** A new method for determining the activity of certain oxidases, with a preliminary study of the potato oxidase, 299

Steenbock, H., Black, Archie, and **Thomas, B. H.** Cereals and rickets. III. The comparative rickets-producing properties of corn, wheat, and oats, and the effect of irradiation and mineral supplements, 585

Strain, Harold H. See SPOEHR and STRAIN, 365

Strauch, Clara M. See MORGAN, STRAUCH, and BLUME, 385

T

Thomas, B. H. See STEENBOCK, BLACK, and THOMAS, 585

U

Ullmann, H. J. See BISCHOFF, ULLMANN, HILL, and LONG, 675

W

Weaver, Willis K., and **Reed, C. I.** Studies on the inorganic constituents of the blood of normal and parathyroidectomized dogs, 281

Whitaker, W. M. See OLMSTED, DUDEN, WHITAKER, and PARKER, 115

—. See OLMSTED, WHITAKER, and DUDEN, 109

Wilson, D. Wright. See JOHNSTON and WILSON, 727

Wilson, Robert H., and **Lewis, Howard B.** Comparative studies of the metabolism of amino acids. III. The formation of glycogen after oral administration of amino acids to white rats, 559

INDEX TO SUBJECTS.

A

Absorption spectrum:
Cholesterol (KOCH, KOCH, and LEMON) 159
Ergosterol (KOCH, KOCH, and LEMON) 159

Acetone:
Isopropyl alcohol determination, urine, in presence of (COOK and SMITH) 251
-Soluble fat, tubercle bacillus, phthioic acid (ANDERSON and CHARGAFF) 77
— —, — —, tuberculostearic acid (ANDERSON and CHARGAFF) 77

Acid(s):
Fatty. *See* Fatty acids.
Organic. *See* Organic acids.

Acid-base equilibrium:
Blood, eclampsia (STANDER, EASTMAN, HARRISON, and CADDEN) 233
—, hemorrhage effect (JOHNSTON and WILSON) 727
Hemorrhage, blood, effect (JOHNSTON and WILSON) 727

Alfalfa:
Curing, vitamin A content (RUSSELL) 289
—, — D content (RUSSELL) 289

Alfalfa—*continued:*
Vitamin A content, curing effect (RUSSELL) 289
— D content, curing effect (RUSSELL) 289

Almond:
Carbohydrates, biological availability (MORGAN, STRAUCH, and BLUME) 385
—, nature (MORGAN, STRAUCH, and BLUME) 385

Aluminum:
Animal matter (KAHLENBERG and CLOSS) 783
Biological matter, spectrogram (MCCOLLUM, RASK, and BECKER) 779
Plant matter (KAHLENBERG and CLOSS) 783
Spectrogram, biological matter (MCCOLLUM, RASK, and BECKER) 779

Amino acid(s):
Benzoylated, in animal organism. V (GRIFFITH) 751
Glycogen formation, ingested (WILSON and LEWIS) 559
Metabolism. III (WILSON and LEWIS) 559

Anemia:
Nutritional, inorganic elements, spinach (MITCHELL and MILLER) 355
—, spinach, inorganic elements (MITCHELL and MILLER) 355
Animal:
Matter, aluminum (KAHLENBERG and CLOSS) 783
Antimony trichloride:
Vitamin A, color reaction (NORRIS and CHURCH) 477
Arginase:
Arginine determination (HUNTER and DAUPHINEE) 627
— —, proteins (HUNTER and DAUPHINEE) 627
Arginine:
Determination, arginase method (HUNTER and DAUPHINEE) 627
—, proteins, arginase method (HUNTER and DAUPHINEE) 627

B

Bacillus:
Tubercle, avian, lipoid fractions, separation (ANDERSON and ROBERTS) 509
—, —, phosphatide fraction (ANDERSON and ROBERTS) 519
—, bovine, lipoid fractions, separation (ANDERSON and ROBERTS) 529
—, fat, acetone-soluble, phthioic acid (ANDERSON and CHARGAFF) 77
Bacillus—*continued:*
Tubercle, fat, acetone-soluble, tuberculostearic acid (ANDERSON and CHARGAFF) 77
—, hexacosanic acid, wax, unsaponifiable (ANDERSON) 351
—, lipoid fractions, avian (ANDERSON and ROBERTS) 509
—, — —, bovine (ANDERSON and ROBERTS) 529
—, lipoids, chemistry. VI (ANDERSON and CHARGAFF) 77
—, —, —. VII (ANDERSON) 327
—, —, —. VIII (ANDERSON) 339
—, —, —. IX (ANDERSON) 351
—, —, —. X (ANDERSON and ROBERTS) 509
—, —, —. XI (ANDERSON and ROBERTS) 519
—, —, —. XII (ANDERSON and ROBERTS) 529
—, phosphatide fraction, avian (ANDERSON and ROBERTS) 519
—, phthioic acid, fat, acetone-soluble (ANDERSON and CHARGAFF) 77
—, tuberculostearic acid, fat, acetone-soluble (ANDERSON and CHARGAFF) 77
—, wax, soft, analysis (ANDERSON) 327
—, —, unsaponifiable (ANDERSON) 339
—, —, —, hexacosanic acid (ANDERSON) 351

Bacteria:
Carbon content (HOPKINS, PETERSON, and FRED) 21
Nitrogen content (HOPKINS, PETERSON, and FRED) 21
Bile:
Fistula, fecal lipids, partition (SPERRY) 455
—, lipids, feces, partition (SPERRY) 455
Biological availability:
Almond carbohydrates (MORGAN, STRAUCH, and BLUME) 385
Biological matter:
Aluminum in, spectrogram (MCCOLLUM, RASK, and BECKER) 779
Blood:
Acid-base equilibrium, eclampsia (STANDER, EASTMAN, HARRISON, and CADDEN) 233
— —, hemorrhage effect (JOHNSTON and WILSON) 727
Eclampsia, acid-base equilibrium (STANDER, EASTMAN, HARRISON, and CADDEN) 233
Hemorrhage, acid-base equilibrium, effect (JOHNSTON and WILSON) 727
Inorganic composition. III (KERR) 47
— constituents, normal dogs (WEAVER and REED) 281
— —, parathyroidectomy (WEAVER and REED) 281
Parathyroidectomy, inorganic constituents (WEAVER and REED) 281
Blood—*continued:*
Sugar, galactose ingestion, variations (HARDING and VAN NOSTRAND) 765
Blood cell:
Red. *See* Erythrocyte.
Blood plasma:
Fish, proteins, distribution (LEPKOVSKY) 667
Proteins, fish, distribution (LEPKOVSKY) 667
Blood serum:
Calcium, diffusible, determination (GREENBERG and GUNTHER) 491
—, non-diffusible, determination (GREENBERG and GUNTHER) 491
Erythrocyte, potassium permeability, influence (KERR) 47
—, sodium permeability, influence (KERR) 47
Fish, proteins, distribution (LEPKOVSKY) 667
Proteins, fish, distribution (LEPKOVSKY) 667
Viscosity changes (FISHBERG) 465

C

Calcium:
Blood cell, red, human, absence (LEIBOFF) 759
— serum, diffusible, determination (GREENBERG and GUNTHER) 491
— —, non-diffusible, determination (GREENBERG and GUNTHER) 491
Cereal influence on retention (BURTON) 405
Determination, diffusible, blood serum (GREENBERG and GUNTHER) 491

Calcium—*continued:*
Determination, non-diffusible, blood serum (GREENBERG and GUNTHER) 491
Retention, cereal influence (BURTON) 405
Calorimetry:
Animal. XXXIX (CHAMBERS and LUSK) 611
Carbohydrate:
Almond, biological availability (MORGAN, STRAUCH, and BLUME) 385
—, nature (MORGAN, STRAUCH, and BLUME) 385
Metabolism. I (HIMWICH, KOSKOFF, and NAHUM) 571
Thymonucleic acid (LEVENE, MIKESKA, and MORI) 785
Carbon:
Bacteria, content (HOPKINS, PETERSON, and FRED) 21
Carbon monoxide:
Hemoglobin, spectrograph (BOOR and BACHEM) 743
Catharsis:
Fatty acids, volatile, lower, feces, effect (GROVE, OLMSTED, and KOENIG) 127
Cereal:
Calcium retention, influence (BURTON) 405
Phosphorus retention, influence (BURTON) 405
Rickets and. III (STEENBOCK, BLACK, and THOMAS) 585
Cholesterol:
Absorption spectrum (KOCH, KOCH, and LEMON) 159
Copper:
Egg, diet effect (ELVEHJEM, KEMMERER, HART, and HALPIN) 89
Corn:
Irradiation, rickets (STEENBOCK, BLACK, and THOMAS) 585
Mineral supplements, rickets (STEENBOCK, BLACK, and THOMAS) 585
Rickets (STEENBOCK, BLACK, and THOMAS) 585
Creatine:
-Creatinine conversion, protein metabolism influence (BOLLMAN) 169
Metabolism, myositis fibrosa (BODANSKY, SCHWAB, and BRINDLEY) 307
—, nephrectomy (CHANUTIN and SILVETTE) 179
Protein metabolism, influence, creatinine, conversion (BOLLMAN) 169
Creatinine:
Creatine-, conversion, protein metabolism influence (BOLLMAN) 169
Protein metabolism influence, creatine conversion to (BOLLMAN) 169

D

Dialuric acid:
Oxidation, spontaneous (HILL) 713

Diet:
Copper in egg, effect of (Elvehjem, Kemmerer, Hart, and Halpin) 89
Fatty acids, volatile, lower, feces, effect (Grove, Olmsted, and Koenig) 127
Growth, tryptophane-deficient, 3-indolepropionic acid supplementing (Berg, Rose, and Marvel) 219
—, —, 3-indolepyruvic acid supplementing (Berg, Rose, and Marvel) 219
—, —, tryptophane derivatives supplementing (Berg, Rose, and Marvel) 207
Iron in egg, effect of (Elvehjem, Kemmerer, Hart, and Halpin) 89
Reaction, parathyroid extract response, effect (Morgan and Garrison) 687
Tryptophane-deficient, 3-indolepropionic acid supplement, growth on (Berg, Rose, and Marvel) 219
—, 3-indolepyruvic acid supplement, growth on (Berg, Rose, and Marvel) 219
—, tryptophane derivatives supplementing, growth on (Berg, Rose, and Marvel) 207
Dissociation constant(s):
Apparent, histidine (Schmidt, Appleman, and Kirk) 137
Dissociation constant(s)— *continued:*
Apparent, tryptophane (Schmidt, Appleman, and Kirk) 137

E

Eclampsia:
Acid-base equilibrium, blood (Stander, Eastman, Harrison, and Cadden) 233
Blood, acid-base equilibrium (Stander, Eastman, Harrison, and Cadden) 233
Egg:
Copper content, diet effect (Elvehjem, Kemmerer, Hart, and Halpin) 89
Iron content, diet effect (Elvehjem, Kemmerer, Hart, and Halpin) 89
Electric current:
High frequency, hyperthermia (Bischoff, Ullmann, Hill, and Long) 675
Hyperthermia, high frequency (Bischoff, Ullmann, Hill, and Long) 675
Enzyme:
Glycogen, hydrolysis (Barbour) 29
Hydrolysis, glycogen (Barbour) 29
Tyrosine, urine, determination (Lichtman and Sobotka) 261
See also Arginase, Oxidase.
Epinephrine:
Glycogen distribution, influence (Sahyun and Luck) 1

Epinephrine—*continued:*
Glycogen formation, liver, influence (CORI and CORI) 275
Ergosterol:
Absorption spectrum (KOCH, KOCH, and LEMON) 159
Erythrocyte:
Calcium absence, human (LEIBOFF) 759
Permeability, potassium, blood serum influence (KERR) 47
—, sodium, blood serum influence (KERR) 47
Potassium permeability, blood serum influence (KERR) 47
Sodium permeability, blood serum influence (KERR) 47
Excretion:
Lipid. VII (SPERRY) 455
Organic acid, pneumonia (GREENWALD) 447
Pneumonia, organic acid (GREENWALD) 447

F

Fat:
Tubercle bacillus, acetone-soluble, phthioic acid (ANDERSON and CHARGAFF) 77
— —, —, tuberculostearic acid (ANDERSON and CHARGAFF) 77
Fatty acid(s):
Distillation, steam, volatile, lower, saturated salt solution (OLMSTED, WHITAKER, and DUDEN) 109
—, volatile, lower, feces, (OLMSTED, DUDEN, WHITAKER, and PARKER) 115
Fatty acid(s)—*continued:*
Feces, volatile, lower, distillation (OLMSTED, DUDEN, WHITAKER, and PARKER) 115
Lower volatile, feces, catharsis effect (GROVE, OLMSTED, and KOENIG) 127
— —, —, diet effect (GROVE, OLMSTED, and KOENIG) 127
— —, —, distillation (OLMSTED, DUDEN, WHITAKER, and PARKER) 115
— —, steam distillation, saturated salt solution (OLMSTED, WHITAKER, and DUDEN) 109
Volatile, lower, feces, catharsis effect (GROVE, OLMSTED, and KOENIG) 127
—, —, —, diet effect (GROVE, OLMSTED, and KOENIG) 127
—, —, —, distillation (OLMSTED, DUDEN, WHITAKER, and PARKER) 115
—, —, steam distillation, saturated salt solution (OLMSTED, WHITAKER, and DUDEN) 109
Feces:
Bile fistula, lipids, partition (SPERRY) 455
Fatty acids, volatile, lower, catharsis effect (GROVE, OLMSTED, and KOENIG) 127
— —, —, —, diet effect (GROVE, OLMSTED, and KOENIG) 127
— —, —, —, distillation (OLMSTED, DUDEN, WHITAKER, and PARKER) 115

Feces—*continued:*
Lipids, bile fistula, partition (SPERRY) 455
Fish:
Blood plasma proteins, distribution (LEPKOVSKY) 667
— serum proteins, distribution (LEPKOVSKY) 667
Fistula:
Bile, fecal lipids, partition (SPERRY) 455
—, lipids, feces, partition (SPERRY) 455

G

Galactose:
Blood sugar variations, ingestion effect (HARDING and VAN NOSTRAND) 765
Urine sugar variations, ingestion effect (HARDING and VAN NOSTRAND) 765
Glucose:
-Lactic acid cycle, liver (HIMWICH, KOSKOFF, and NAHUM) 571
— — —, muscle (HIMWICH, KOSKOFF, and NAHUM) 571
Glutenin:
Wheat, identity (BLISH and SANDSTEDT) 195
—, nature (BLISH and SANDSTEDT) 195
Glutose:
Formation, hexose interconversion by phosphates (SPOEHR and STRAIN) 365
—, phosphates on hexoses (SPOEHR and STRAIN) 365
Glycine:
Synthesis, rat (GRIFFITH) 751
Glycogen:
Determination, tissue (OSTERBERG) 97
Distribution, epinephrine influence (SAHYUN and LUCK) 1
—, insulin influence (SAHYUN and LUCK) 1
Enzyme hydrolysis (BARBOUR) 29
Epinephrine influence, distribution (SAHYUN and LUCK) 1
— —, liver, formation (CORI and CORI) 275
Formation, amino acid ingestion (WILSON and LEWIS) 559
—, liver, epinephrine influence (CORI and CORI) 275
—, —, insulin influence (CORI and CORI) 275
Hydrolysis, enzyme (BARBOUR) 29
Insulin influence, distribution (SAHYUN and LUCK) 1
— —, liver, formation (CORI and CORI) 275
Tissue, determination (OSTERBERG) 97
Growth:
Tryptophane and. II (BERG, ROSE, and MARVEL) 207
— —. III (BERG, ROSE, and MARVEL) 219
Tryptophane-deficient diet, tryptophane derivatives

Growth—*continued:*
supplementing (BERG, ROSE, and MARVEL) 207

H

Height:
-Weight coordinates, nomogram, basal metabolism (BRUEN) 607
Hemoglobin:
Carbon monoxide, spectrograph (BOOR and BACHEM) 743
Colorless, splenectomy effect (RAY and ISAAC) 549
Intermediate compounds in oxygenation (CONANT and MCGREW) 421
Oxygenation, intermediate compounds (CONANT and MCGREW) 421
Splenectomy, colorless form (RAY and ISAAC) 549
Hemorrhage:
Acid-base equilibrium, blood, effect (JOHNSTON and WILSON) 727
Blood, acid-base equilibrium, effect (JOHNSTON and WILSON) 727
Hexacosanic acid:
Tubercle bacillus, wax, unsaponifiable (ANDERSON) 351
Wax, unsaponifiable, tubercle bacillus (ANDERSON) 351
Hexose(s):
Glutose formation from, by phosphates (SPOEHR and STRAIN) 365
Hexose(s)—*continued:*
Interconversion by phosphates (SPOEHR and STRAIN) 365
Phosphates on interconversion of (SPOEHR and STRAIN) 365
Hippuric acid:
Synthesis, rat (GRIFFITH) 751
Histidine:
Dissociation constants, apparent (SCHMIDT, APPLEMAN, and KIRK) 137
Hyperthermia:
Electric current, high frequency (BISCHOFF, ULLMANN, HILL, and LONG) 675

I

3-Indolepropionic acid:
Tryptophane-deficient diet, supplement, growth on (BERG, ROSE, and MARVEL) 219
3-Indolepyruvic acid:
Tryptophane-deficient diet, supplement, growth on (BERG, ROSE, and MARVEL) 219
Inorganic constituents:
Blood. III (KERR) 47
—, normal dogs (WEAVER and REED) 281
—, parathyroidectomy (WEAVER and REED) 281
Inorganic elements:
Spinach, anemia, nutritional (MITCHELL and MILLER) 355
Inosinic acid:
Origin (BUELL) 435

Insulin:
Glycogen distribution, influence (SAHYUN and LUCK) 1
— formation, liver, influence (CORI and CORI) 275
Intestine:
Organic acid production in excised (VON OETTINGEN and SOLLMANN) 245
Iron:
Egg, diet effect (ELVEHJEM, KEMMERER, HART, and HALPIN) 89
Irradiation:
Corn, rickets (STEENBOCK, BLACK, and THOMAS) 585
Oats, rickets (STEENBOCK, BLACK, and THOMAS) 585
Wheat, rickets (STEENBOCK, BLACK, and THOMAS) 585
Isopropyl alcohol:
Determination, urine, in acetone presence (COOK and SMITH) 251
Urine, determination, in acetone presence (COOK and SMITH) 251

L

Lactic acid:
Glucose-, cycle, liver (HIMWICH, KOSKOFF, and NAHUM) 571
—, —, muscle (HIMWICH, KOSKOFF, and NAHUM) 571
Lignin:
Metabolism (CSONKA, PHILLIPS, and JONES) 65
Lipid:
Excretion. VII (SPERRY) 455
Feces, bile fistula, partition (SPERRY) 455
Partition, feces, bile fistula (SPERRY) 455
Lipoid:
Tubercle bacillus, avian, phosphatide fraction (ANDERSON and ROBERTS) 519
— —, —, separation (ANDERSON and ROBERTS) 509
— —, bovine, separation (ANDERSON and ROBERTS) 529
— —, chemistry. VI (ANDERSON and CHARGAFF) 77
— —, —. VII (ANDERSON) 327
— —, —. VIII (ANDERSON) 339
— —, —. IX (ANDERSON) 351
— —, —. X (ANDERSON and ROBERTS) 509
— —, —. XI (ANDERSON and ROBERTS) 519
— —, —. XII (ANDERSON and ROBERTS) 529
— —, hexacosanic acid, wax, unsaponifiable (ANDERSON) 351
— —, wax, soft, analysis (ANDERSON) 327
— —, —, unsaponifiable (ANDERSON) 339
— —, —, —, hexacosanic acid (ANDERSON) 351
Liver:
Glucose-lactic acid cycle (HIMWICH, KOSKOFF, and NAHUM) 571

XUM

Liver—*continued:*
Glycogen formation, epinephrine influence (Cori and Cori) 275
— —, insulin influence (Cori and Cori) 275

M

Metabolism:
Amino acids. III (Wilson and Lewis) 559
Basal, nomogram, height-weight coordinates (Bruen) 607
Carbohydrate. I (Himwich, Koskoff, and Nahum) 571
Creatine, myositis fibrosa (Bodansky, Schwab, and Brindley) 307
—, nephrectomy (Chanutin and Silvette) 179
Lignin (Csonka, Phillips, and Jones) 65
Pneumonia. I (Greenwald) 447
Protein, creatine-creatinine conversion, influence (Bollman) 169
Muscle:
Glucose-lactic acid cycle (Himwich, Koskoff, and Nahum) 571
Myositis fibrosa:
Creatine metabolism (Bodansky, Schwab, and Brindley) 307

N

Nephrectomy:
Creatine metabolism (Chanutin and Silvette) 179
Nephrectomy—*continued:*
Metabolism, creatine (Chanutin and Silvette) 179
Nitrogen:
Bacteria, content (Hopkins, Peterson, and Fred) 21
Nomogram:
Metabolism, basal, height-weight coordinates (Bruen) 607
Nucleic acid:
Thymo-, carbohydrate (Levene, Mikeska, and Mori) 785
Nutrition:
Anemia, inorganic elements, spinach (Mitchell and Miller) 355
—, spinach, inorganic elements (Mitchell and Miller 355

O

Oats:
Irradiation, rickets (Steenbock, Black, and Thomas) 585
Mineral supplements, rickets (Steenbock, Black, and Thomas) 585
Rickets (Steenbock, Black, and Thomas) 585
Oil:
Cod liver. *See* Cod liver oil.
Organic acid(s):
Determination (Greenwald) 447
Excretion, pneumonia (Greenwald) 447
Intestine, excised, production (von Oettingen and Sollmann) 245

Organic acid(s)—*continued:*
Production, intestine, excised (VON OETTINGEN and SOLLMANN) 245
Ovary:
Pregnancy, cow (CARTLAND, HEYL, and NEUPERT) 539
Oxidase:
Activity determination (STEARN and DAY) 299
Potato, activity determination (STEARN and DAY) 299

P

Parathyroid:
Extract, diet reaction, response relation (MORGAN and GARRISON) 687
—, vitamin D, response relation (MORGAN and GARRISON) 687
Parathyroidectomy:
Blood, inorganic constituents (WEAVER and REED) 281
Inorganic constituents, blood (WEAVER and REED) 281
Permeability:
Erythrocyte, potassium, blood serum influence (KERR) 47
—, sodium, blood serum influence (KERR) 47
Phlorhizin:
Specific dynamic action, dog (CHAMBERS and LUSK) 611
Phosphate(s):
Glutose formation from hexoses (SPOEHR and STRAIN) 365
Phosphate(s)—*continued:*
Hexose interconversion by (SPOEHR and STRAIN) 365
Phosphatide:
Tubercle bacillus, avian (ANDERSON and ROBERTS) 519
Phosphorus:
Cereal influence on retention (BURTON) 405
Retention, cereal influence (BURTON) 405
Phthioic acid:
Fat, acetone-soluble, tubercle bacillus (ANDERSON and CHARGAFF) 77
Tubercle bacillus, fat, acetone-soluble (ANDERSON and CHARGAFF) 77
Plant:
Matter, aluminum (KAHLENBERG and CLOSS) 783
Pneumonia:
Metabolism. I (GREENWALD) 447
Organic acid excretion (GREENWALD) 447
Potassium:
Erythrocyte permeability, blood serum influence (KERR) 47
Potato:
Oxidase, activity determination (STEARN and DAY) 299
Pregnancy:
Ovary changes, cow (CARTLAND, HEYL, and NEUPERT) 539
Propionic acid:
3-Indole-, tryptophane-deficient diet, supplement, growth on (BERG, ROSE, and MARVEL) 219

Protein(s):
Arginine determination, arginase method (HUNTER and DAUPHINEE) 627
Blood plasma, fish, distribution (LEPKOVSKY) 667
— serum, fish, distribution (LEPKOVSKY) 667
Metabolism, creatine-creatinine conversion, influence (BOLLMAN) 169
Provitamin:
D, fractionation (KOCH, KOCH, and RAGINS) 141
Pyruvic acid:
3-Indole-, tryptophane-deficient diet, supplement, growth on (BERG, ROSE, and MARVEL) 219

R

Rickets:
Cereals and. III (STEENBOCK, BLACK, and THOMAS) 585
Corn (STEENBOCK, BLACK, and THOMAS) 585
—, irradiation effect (STEENBOCK, BLACK, and THOMAS) 585
—, mineral supplements effect (STEENBOCK, BLACK, and THOMAS) 585
Oats (STEENBOCK, BLACK, and THOMAS) 585
—, irradiation effect (STEENBOCK, BLACK, and THOMAS) 585
Rickets—*continued:*
Oats, mineral supplements effect (STEENBOCK, BLACK, and THOMAS) 585
Wheat (STEENBOCK, BLACK, and THOMAS) 585
—, irradiation effect (STEENBOCK, BLACK, and THOMAS) 585
—, mineral supplements effect (STEENBOCK, BLACK, and THOMAS) 585

S

Sodium:
Erythrocyte permeability, blood serum influence (KERR) 47
Specific dynamic action:
(CHAMBERS and LUSK) 611
Phlorhizinized dog (CHAMBERS and LUSK) 611
Spectrogram:
Aluminum, biological matter (MCCOLLUM, RASK, and BECKER) 779
Spectrograph:
Carbon monoxide hemoglobin (BOOR and BACHEM) 743
Hemoglobin, carbon monoxide (BOOR and BACHEM) 743
Spinach:
Anemia, nutritional, inorganic elements (MITCHELL and MILLER) 355
Inorganic elements, anemia, nutritional (MITCHELL and MILLER) 355

Spleen:
Chemical studies. IV (RAY and ISAAC) 549
Splenectomy:
Hemoglobin, colorless (RAY and ISAAC) 549
Sugar:
Blood, galactose ingestion, variations (HARDING and VAN NOSTRAND) 765
Urine, galactose ingestion, variations (HARDING and VAN NOSTRAND) 765

T

Thymonucleic acid:
Carbohydrate (LEVENE, MIKESKA, and MORI) 785
Tissue:
Glycogen determination (OSTERBERG) 97
Tryptophane:
Derivatives supplementing tryptophane-deficient diet, growth on (BERG, ROSE, and MARVEL) 207
Diet deficient in, 3-indolepropionic acid supplement, growth on (BERG, ROSE, and MARVEL) 219
— — —, 3-indolepyruvic acid supplement, growth on (BERG, ROSE, and MARVEL) 219
— — —, tryptophane derivatives supplementing, growth on (BERG, ROSE, and MARVEL) 207
Dissociation constants, apparent (SCHMIDT, APPLEMAN, and KIRK) 137
Tryptophane—*continued:*
Growth and. II (BERG, ROSE, and MARVEL) 207
— —. III (BERG, ROSE, and MARVEL) 219
—, tryptophane-deficient diet supplemented by derivatives (BERG, ROSE, and MARVEL) 207
Tubercle:
Bacillus, avian, lipoid fractions, separation (ANDERSON and ROBERTS) 509
—, —, phosphatide fraction (ANDERSON and ROBERTS) 519
—, bovine, lipoid fractions, separation (ANDERSON and ROBERTS) 529
—, fat, acetone-soluble, phthioic acid (ANDERSON and CHARGAFF) 77
—, —, —, tuberculostearic acid (ANDERSON and CHARGAFF) 77
—, hexacosanic acid, wax, unsaponifiable (ANDERSON) 351
—, lipoid fractions, avian (ANDERSON and ROBERTS) 509
—, — —, bovine (ANDERSON and ROBERTS) 529
—, lipoids, chemistry. VI (ANDERSON and CHARGAFF) 77
—, —, —. VII (ANDERSON) 327
—, —, —. VIII (ANDERSON) 339
—, —, —. IX (ANDERSON) 351

Tubercle—*continued:*
Bacillus, lipoids, chemistry. X (ANDERSON and ROBERTS) 509
—, —, —. XI (ANDERSON and ROBERTS) 519
—, —, —. XII (ANDERSON and ROBERTS) 529
—, phosphatide fraction, avian (ANDERSON and ROBERTS) 519
—, phthioic acid, fat, acetone-soluble (ANDERSON and CHARGAFF) 77
—, tuberculostearic acid, fat, acetone-soluble (ANDERSON and CHARGAFF) 77
— wax, soft, analysis (ANDERSON) 327
— —, unsaponifiable (ANDERSON) 339
— —, —, hexacosanic acid (ANDERSON) 351
Tuberculostearic acid:
Fat, acetone-soluble, tubercle bacillus (ANDERSON and CHARGAFF) 77
Tubercle bacillus, fat, acetone-soluble (ANDERSON and CHARGAFF) 77
Tyrosine:
Determination, enzymatic, urine (LICHTMAN and SOBOTKA) 261
Urine, determination, enzymatic (LICHTMAN and SOBOTKA) 261

U

Urine:
Isopropyl alcohol determination, in acetone presence (COOK and SMITH) 251
Sugar, galactose ingestion, variations (HARDING and VAN NOSTRAND) 765
Tyrosine determination, enzymatic method (LICHTMAN and SOBOTKA) 261

V

Vitamin(s):
A, alfalfa, curing effect (RUSSELL) 289
—, antimony trichloride, color reaction (NORRIS and CHURCH) 477
—, color reaction, antimony trichloride (NORRIS and CHURCH) 477
D, alfalfa, curing effect (RUSSELL) 289
—, parathyroid extract response, effect (MORGAN and GARRISON) 687
Pro-, D, fractionation (KOCH, KOCH, and RAGINS) 141

W

Wax:
Hexacosanic acid in unsaponifiable, tubercle bacillus (ANDERSON) 351
Tubercle bacillus, analysis (ANDERSON) 327
— —, hexacosanic acid in unsaponifiable (ANDERSON) 351
— —, unsaponifiable (ANDERSON) 339
Unsaponifiable, tubercle bacillus (ANDERSON) 339

Wax—*continued:*
Unsaponifiable, tubercle bacillus, hexacosanic acid in (ANDERSON) 351
Weight:
Height-, coordinates, nomogram, basal metabolism (BRUEN) 607
Wheat:
Glutenin, identity (BLISH and SANDSTEDT) 195
Wheat—*continued:*
Glutenin, nature (BLISH and SANDSTEDT) 195
Irradiation, rickets (STEENBOCK, BLACK, and THOMAS) 585
Mineral supplements, rickets (STEENBOCK, BLACK, and THOMAS) 585
Rickets (STEENBOCK, BLACK, and THOMAS) 585